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Notes on plants of the southern United States—V

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KALMIELLA HIRSUTA (Walt.) Small

Sandy scrub-land, between Theodore and Hollanders Island, Mobile County, Alabama, September 3, 1912, *Pennell 4513*.

POLYCODIUM FLORIBUNDUM (Nutt.) Greene

Open pine-land, Biloxi, Harrison County, Mississippi, August 28, 1912, *Pennell 4405*.

SABATIA ELLIOTTII Steud.

Moist scrub-land, between Theodore and Hollanders Island, September 3, 1912, *Pennell 4512*.

Dasystephana tenuifolia (Raf.) Pennell, comb. nov.

Diploma tenuifolia Raf. Fl. Tell. **3**: 27. 1837. "Florida . . . seen in the herb. of Torrey." The type, labeled in Rafinesque's handwriting "G. tenufolia Raf. Monog.," is in the Columbia University Herbarium at the New York Botanical Garden. It bears data of collection, "Florida, Mr. Croom, 1832, flowers white."

In the American Journal of Science for October, 1833 (**25**: 69), H. B. Croom records "Gentiana alba (White flowered Gentian)" as growing in "wet pine woods" in Middle Florida, a region defined as "that tract of country which lies between the Suwanee River on the east, and the Apalachicola on the west." His "observations were chiefly made . . . about twenty miles west of Tallahassee, about thirty miles from the Gulf of Mexico, in latitude about 30° 30′." The plant was seen in bloom January 1–5, 1833, and must certainly be the same species as the plant sent Dr. Torrey.

Dasystephana tenuifolia is most nearly allied to *D. Porphyrio* (Gmel.) Small, long known as *Gentiana angustifolia* Michx. Rafinesque briefly distinguishes the two by certain features, the most obvious of which is the white corolla of the southern plant. Southern botanical authors treating of the Carolina flora, describe the blue-flowered species, but Chapman, working on the Gulf coast, knew only the white-blooming low-growing plant. A brief contrast of the two would be:

Plant 3–5 dm. tall. Corolla deep-blue within. Stamens and pistil about equaling the tube of the corolla. Stigmas spreading, 3–4 mm. long. Sandy pine-lands, New Jersey to South Carolina. 1. *D. Porphyrio.*

Plant 1–2.5 dm. tall. Corolla white within. Stamens and pistil only about one half the length of the corolla-tube. Stigmas slightly spreading, about 1 mm. long. Low pine barrens, West Florida. 2. *D. tenuifolia.*

Beside the type nearly all the specimens of *D. tenuifolia* seen are from the Chapman Herbarium, and his No. 467b, collected November 2, 1884, and distributed by the Biltmore Herbarium, may be cited. The only specimens of recent collecting which have come to my notice were obtained by Dr. G. C. Fisher at Red Bay, Walter County, Florida, in January, 1917. The same observer has found the plant at Sanborn in Wakulla County. These definite localities enable us to predict the occurrence of the species throughout the low moist pine-lands between Apalachee Bay and Escambia Bay.

Acerates hirtella Pennell, sp. nov.

? *Oligoron longifolium hirsutum* Raf. New Fl. Am. 4: 60. 1838. No locality given, but description of pedicels as long-hirsute suggests, though it over-emphasizes, a feature of the plant here considered.

Stem 6–10 dm. tall, stout, strongly puberulent in lines above. Leaves scattered, numerous, rather crowded, lanceolate-linear, 9–17 cm. long, 0.6–1.4 cm. wide, scabro-puberulent above and on the veins beneath. Peduncles stout, less than 3 cm. long, scabro-hirtellous. Umbels four to twelve, twenty-five to one hundred-flowered. Pedicels 12–15 mm. long, hirtellous with spreading hairs. Flowers 8–8.5 mm. long. Sepals 2 mm. long, lanceolate-acuminate, hirtellous on the back. Petals 5 mm. long, lanceolate, greenish yellow, sometimes slightly purple-tinged on back toward apex, crenulate at apex. Column 0.5–0.7 mm. long. Hoods entire, rounded, one half to two thirds the length of the anthers. Anthers acute, each with two wings which are angled above the middle. Follicles erect on reflexed fruiting pedicels, 10 cm. long, lanceolate, short-caudate, hirtellous-pubescent. Seeds obovoid, flat, 8 mm. long. Coma silvery, 35 mm. long.

TYPE: dry soil, east of Carthage, Jasper County, Missouri, *F. W. Pennell 5372*, in the herbarium of the University of Pennsylvania.

Wet to dry prairies, northern Illinois to eastern Kansas, and in "swamps" in Michigan. Probably extends to Oklahoma, as Nuttall collected it on the "Red River." This is the plant of the Mississippi Valley which has been merged with the Coastal Plain *A. floridana* (Lam.) A. S. Hitchc., and the following numbers are characteristic, *H. S. Reynolds 28*, *Agnes Chase 1439*, *J. R. Gardner 563*, *B. F. Bush 244*, *A. S. Hitchcock 763*.

The key below contrasts these two species:

Puberulence finely cinereous. Pedicels finely puberulent with incurved hairs. Hoods two thirds to three fourths the length of the anthers. Seeds 9–10 mm. long, dark-brown. Leaves not crowded, narrowly to broadly linear, glabrate. Flowers 7 mm. long. Petals strongly purple externally toward apex, with a narrow white border. Umbels one to six, ten to thirty-flowered, on peduncles reaching 3–9 cm. long. Capsule about 11 cm. long, narrowly lanceolate, long-caudate, finely appressed-puberulent. 1. *A. floridana.*

Puberulence more densely cinereous. Pedicels pubescent with spreading hairs. Hoods one half to two thirds the length of the anthers. Seeds 8 mm. long, cinnamon. Leaves crowded, broadly linear, scabrous to the touch. Flowers 8–8.5 mm. long. Petals greenish, sometimes slightly greenish externally toward apex, with a broader white border. Umbels four to twelve, twenty-five- to one hundred-flowered, on peduncles not over 3 cm. long. Capsule lanceolate, short-caudate, 10 cm. long, hirtellous-pubescent. 2. *A. hirtella.*

EVOLVULUS SERICEUS Sw.

Two forms were collected together on black calcareous soil, Edwards Plateau, northwest of New Braunfels, Comal County, Texas, September 14, 1913, *Pennell 5440*, *5442*. No. 5440, with broader densely white-lanate leaves, bore blue corollas; No. 5442, with narrower leaves, strigose-lanate beneath, bore pale blue corollas. The latter is nearer the typical form of the West Indies.

PHLOX FLORIDANA Benth.

Dry sandy pine-land, east of Mississippi City, Harrison County, Mississippi, August 27, 1912, *Pennell 4353*.

EUPLOCA RACEMOSA Rose & Standley

Dry sandy oak-land, west of Sheridan, Colorado County, Texas, September 21, 1913, *Pennell 5516*. This agrees closely with the description of the species of western Texas. It is probably most readily distinguished from *E. convolvulacea* Nutt. by its narrower leaves, lanceolate or nearly so in the specimens seen. Other Texan collections to be referred here are: San Antonio, *E. Palmer 889;* western Texas, *S. B. Buckley.*

VERBENA VENOSA Gill. & Hook.

Moist soil, Mandeville, St. Tammany Parish, Louisiana, August 15, 1912, *Pennell 4204;* moist soil, Catalpa, West Feliciana Parish, August 24, 1912, *Pennell 4332*. Introduced from South America; reported from Houston, Texas, and previously collected in Louisiana in Plaquemines Parish, *A. B. Langlois 49*.

MONARDA PUNCTATA L.

The species is widespread and abundant through most of the Coastal Plain of the southeastern states, occurring inland in the southern Appalachians and westward to Sapulpa, Creek County, Oklahoma, *Pennell 5390*. Two geographical subspecies, which seem worthy of recognition, may be distinguished from the typical form of the species and from each other by the following key:

Leaves lanceolate to ovate-lanceolate, their blades obviously wider proximally and with definite petioles. Corolla conspicuously spotted.	
Stem finely appressed-pubescent.	1. *M. punctata.*
Stem pubescent with spreading hairs.	1*a*. *M. punctata villicaulis.*
Leaves linear-lanceolate, obscurely petioled. Corolla not or scarcely spotted.	1*b*. *M. punctata immaculata.*

1*a*. **Monarda punctata villicaulis** Pennell, subsp. nov.

Stem pubescent with spreading hairs. Plant usually stouter than in the typical form.

TYPE: dry sandy open soil, Clarke, Lake County, Indiana, collected in flower August 22, 1915, *F. W. Pennell 6412;* in the herbarium of the New York Botanical Garden.

Sandy soil, northern Indiana and northern Illinois; far isolated from the typical species of the Coastal Plain. Other collections seen are:

INDIANA. Kosciusko: Winona, *C. C. Deam 1494;* Lake: Whitings, *N. L. Britton.*

ILLINOIS. Cook: Hyde Park, *A. Chase 1166* (sand near lake); Pullman (Y).

1*b*. **Monarda punctata immaculata** Pennell, subsp. nov.

Stem pubescent with fine reflexed appressed hairs. Leaves linear-lanceolate, obscurely petioled. Corolla not or scarcely spotted.

TYPE: sandy soil, Aloe, Victoria County, Texas, collected in flower September 8, 1913, *F. W. Pennell 5494;* in the herbarium of the University of Pennsylvania; iso-type in the herbarium of the New York Botanical Garden.

Also seen from Texas, without locality, collected by Charles Wright.

CLINOPODIUM COCCINEUM (Nutt.) Kuntze

Dry sandy pine-land, Biloxi, Harrison County, Mississippi, August 27, 1912, *Pennell 4372;* also Mississippi City, Harrison County, *Pennell 4355.*

Dry sandy ridges in the longleaf pine-land, southern Georgia and northern Florida to southern Mississippi.

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